III. REMARKS

Status of the Claims

Claims 1 is canceled and new claim 11 is added. Claims 2, 4, 5, and 11 are presented for further consideration.

Summary of the Office Action

As stated in the Advisory Action of October 12, 2006, Claims 1,2,4, and 5 stand rejected under 35USC103(a) on the basis of the cited reference Stacy, U.S. Patent No. 5,957,645 in view of either of the cited references Wagner, U.S. Patent No. 6,199,455, or the reference Tomalis, U.S. Patent No. 2,474,994, or the reference Phillips et al, U.S. Patent No. 2,046,839. The Examiner is respectfully requested to reconsider his rejection in view of the above amendments and the following remarks.

Applicant has again amended the application to more clearly define the transition surface on which an interference contour is formed taking into consideration the comments of the Examiner in the cited Advisory Action.

The subject matter of this application is directed to the problem of providing a "stick fit" feature in conjunction with a fastener having a recess that utilizes spiral shaped wings, as described in the reference Stacy. Such a feature has not been previously available because of the difficulty of manufacture.

It is agreed that the reference Stacy fails to disclose a "stick fit" feature.

The Examiner has cited 3 different references, 2 of which are cited by Applicant in the Background Section of this Application, as examples of attempts to provide a "stick fit" feature associated with recess shapes other than the spiral shaped recess. The third reference is the original cruciform recess used in the widely know phillips head screw. The reference Wagner describes a modified square drive fastener and the reference

Tomalis describes a modified cruciform recessed fastener.

The claims of this application positively claim a recess having:

"a plurality of wings radiating outwardly from the central portion, each of the wings having an installation wall and a removal wall, the wings being configured so that at least one of the installation or removal walls defines a segment of a spiral over its extent;"

The "stick fit" feature is provided by forming a contour on the already highly contoured transition surface between the wings. The claims clearly define the interference contour according to the following:

"each of said transition surfaces formed having an interference contour extending radially inward into the central portion, said contour being tapered from a first radial distance from the longitudinal axis at a top portion thereof to a second radial distance from said longitudinal axis at a bottom portion thereof;"

The reference Wagner describes a square drive style fastener recess that employs rectangular engagement surfaces. There are no "wings" associated with the recess of this fastener. It employs oppositely directed drive walls 14 and first outer walls 17 to lock the matching driver in the recess to prevent cam out.(see column 6, lines 3-15). Stick-fit is provided by tapering perimeter wall 12, as described at column 6, lines 35-44. In this portion of the description Wagner teaches having a secondary drive wall that has a surface area much larger than the surface area of the primary drive surface. It is the secondary drive surfaces that are constructed with a taper to encourage stick-fit. This illustrates that the recess of Wagner bears no resemblance to the spiral drive recess of the subject application. There is no transition surface between the installation and removal drive surfaces from which an interference contour extends, as described in the claims as amended.

The interference contour of this application is formed between the drive surfaces, not on the drive surfaces as in Wagner. Wagner does not teach a "stick fit" feature that is readily adaptable to the spiral recess of the fastener of this application. The tapered surface of Wagner is extensive and its use would necessarily defeat the advantages provided by the spirally shaped wings. It would not be obvious to one skilled in the art to modify the recess of Stacy based on the teaching of Wagner to obtain "stick fit" in a spiral recessed fastener.

As discussed in this application, the forming of the recess of this application is difficult and has hindered the constructed of a spiral fastener with the "stick fit" feature. This is because of the high contour and limited surface area of the transition surface between wings. Accordingly, the use of such surfaces to generate an interference fit has not been considered. The result, as demonstrated by the samples submitted by applicant, is surprising, as the useful surface area between wings is very limited. Nevertheless, Applicant has produced a very effective "stick fit" feature. The use of this limited surface area to provide an interference fit is not obvious based on the cited references.

The original phillips head screw, as described in the reference Phillips cited by the examiner, did not exhibit "stick fit" and describes a standard fastener referred to as a cruciform recessed fastener. It is not a fastener having a spiral recess. It therefore does not add anything to the teaching of the reference Stacy relevant to this application.

The reference Tomalis was introduced as an improvement in the cruciform recessed fastener of Phillips and provided a "stick fit" feature. This feature is formed by flaring rib walls 22 between cruciform grooves formed by walls 18. It should be observed that a relatively significant expanse of surface is formed by rib walls 22 with which to generate the interference fit. Similar Wagner, the relatively large tapered surface of Tomalis would necessarily defeat the advantages provided by the spirally shaped wings of this application. Since such an expanse is not available in a recessed shaped in the

spiral form, it would not be obvious to one skilled in the art to create a "stick fit" feature in a spiral recessed fastener based on the teaching of Stacy in view of the teaching of Tomalis.

Applicant has amended the claims in response to the questions raised by the Examiner in telephone interviews and the advisory action to more clearly define the interference surfaces to distinguish the cited references. In addition, the limitations of the "stick fit" configurations of Wagner and Tomalis are described to indicate why their teachings do not render the subject matter of this application obvious.

For all of the above reasons, it is respectfully submitted that all of the claims now present in the application are clearly novel and patentable over the prior art of record, and are in proper form for allowance. Accordingly, favorable reconsideration and allowance is respectfully requested. Should any unresolved issues remain, the Examiner is invited to call Applicants' attorney at the telephone number indicated below.

The Commissioner is hereby authorized to charge payment of $1360 (for the RCE fee and extension of time) as well as any other fees associated with this communication or credit any over payment to Deposit Account No. 16-1350.

Respectfully submitted,

Geza C. Ziegler, Jr.
Reg. No. 44,004

2 Nov 2004
Date

Perman & Green, LLP
425 Post Road
Fairfield, CT 06824
(203) 259-1800
Customer No.: 2512

CERTIFICATE OF ELECTRONIC FILING

I hereby certify that this correspondence is being transmitted electronically, on the date indicated below, addressed to the Mail Stop RCE, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Date: 2 November 2004 Signature: _____

Lisa Shimizu

Person Making Deposit